Service Area Plan

Department of Health

Local Dental Services (44002)

Service Area Background Information

Service Area Description

This service area provides a range of oral health services for the community including education, prevention, screening, diagnosis and treatment. The focus is primarily on the provision of quality services to the indigent population and other special population groups, especially children who, for various reasons, lack access to basic oral health care. In addition, the service area recruits volunteers or staff to administer the fluoride mouth rinse programs in schools where lack of fluoridated water places children at higher risk of dental caries. The service area also monitors the oral health status of the community using standard measures of need, including evaluation of demographic data, availability of fluoridated water supplies and supplemental fluoride programs, prevalence of dental disease both past and present, appropriate utilization of dental sealants, and availability and accessibility of dental education, prevention, screening, diagnostic and treatment services.

Service Area Alignment to Mission

This service area directly aligns with the Virginia Department of Health (VDH) mission to promote and protect the health of Virginians by educating the public about oral health and oral disease and improving oral health through population and individual dental services.

Service Area Statutory Authority

•Section 32.1-2 of the Code of Virginia requires VDH to administer and provide a comprehensive program of preventive, curative, restorative and environmental health services, educate the citizenry in health and environmental matters, develop and implement health resource plans, collect and preserve vital records and health statistics, assist in research, and abate hazards and nuisances to the health and to the environment, both emergency and otherwise, thereby improving the quality of life in the Commonwealth.

•Section 32.1-11 of the Code of Virginia authorizes VDH to formulate a program of environmental health services, laboratory services and preventive, curative and restorative medical care services, including home and clinic health services described in Titles V, XVIII and XIX of the United States Social Security Act and amendments thereto, to be provided by the Department on a regional, district or local basis.

Service Area Customer Base

Customer(s)	Served	Potential
Dental Patients age 0 -18 (95% quality for Fed. School lunch program	21,887	302,002
Dental Patients age 18 + yrs (98% less than 200% FPL)	3,683	447,190
Fluoride Rinse Recipients	45,000	75,000

Anticipated Changes In Service Area Customer Base

Oral health education for all Virginians will continue to be a priority of local health districts (LHD). As the population ages, increased educational efforts targeting the elderly are anticipated, with a particular focus on oral cancer screening in people over age 50 years. Assessment of access to oral health services will continue to be a focus of this service area, the frequency or content of which may change (increase) to reflect changes in population and/or the number of providers and provider practice patterns.

Other population based interventions may be anticipated to change. It is expected that expansion of public water systems to more Virginians may decrease the need for fluoride mouth rinse programs and increase the need for monitoring of fluoridation of these new systems.

Demand for and growth in the provision of direct dental services to indigent children and adults is anticipated. Nationally, an increase of 300,000 children ages 0-19 is anticipated in the next decade, and this growth is expected to be greatest in lower socioeconomic groups at highest risk for dental decay. Growing numbers of adults who lack any health insurance, which is a strong predictor of access to dental care, portend an increase in demand for dental care, both emergency and non-emergency services, from public health dental providers. Low reimbursement from Virginia Medicaid leading to minimal participation in Medicaid by Virginia dentists is expected to continue to require the LHD to be a community partner in providing direct services. The downward trend in the number of dentists graduated from Virginia's only dental school over the past two decades may continue to contribute to difficulty accessing dental care that some experience, particularly the non-white population and low-income children, causing more to seek out public health dental services. The availability of dental clinics offering free or discounted dental services (with the amount of the discount generally tied to the federal poverty level) in an area will certainly affect the demand for public health dental services.

Service Area Products and Services

- Dental education to inform parents and patients of recommended individual preventive oral health practices; to inform and educate other health professionals of recommended preventive dental practices, community resources, etc; to educate local government, community members about oral health status of community and the availability and access to population and individual dental preventive and restorative dental care; to function as a resource on oral health for schools, head start and other partners who serve children
- Diagnostic dental services, including oral examinations, dental x rays, etc.
- Preventive dental services, including sealants, fluoride application, prophy, etc.
- Restorative dental services, including endodontic, peridontic, prosthodontic and oral surgery services
- Fluoride mouth rinse programs administered to populations of children with no access to fluoridated water
- Dental emergency care, primarily for indigent adult population, including emergency evaluation for dental pain, and required treatment including extraction(s)
- Adult oral cancer screening targeting patients over 50 years of age

Factors Impacting Service Area Products and Services

Dental caries is the most common chronic disease of childhood, occurring five to eight times as frequently as asthma, the second most common chronic disease in children. More than half of all children have caries by the second grade; and by the time students finish high school, about 80% have caries. Since the early 1970s, cases of dental caries in permanent teeth have declined among school-aged children, largely a result of various preventive regimens such as water fluoridation and increased personal use of fluoride containing paste and rinses. To continue this, increased use of dental sealants, tooth brushing with fluoridated toothpaste, community water fluoridation and improved dietary habits are needed to further reduce decay. Data from National Health and Nutrition Examination Survey (NHANES) indicated that 30 percent of all adults had untreated dental decay, with insufficient dental services disproportionately affecting the poorly educated, minority and socioeconomically disadvantaged. Oral and pharyngeal cancers are newly diagnosed in approximately 31,000 people per year, leading to 8100 deaths annually. Most are detected in later stages contributing to low five year survival rates. Only 13 percent of US adults aged 40 years or older reported having an oral cancer examination in the past year.

Factors affecting the provision of services include the reduced staffing levels particularly of dentists and dental hygienists in public health dentistry. In addition, the public health dentist workforce is aging. Approximately 15 of the 45 full time dentists (33%) currently employed by local health departments will be eligible for retirement within the next five years. Low salaries relative to alternatives for clinical dentists negatively impact recruitment and retention. Young graduates with substantial educational debt and mid-career dentists with the lure of private practice incomes are difficult to attract and retain. Recruitment efforts will need to be enhanced as will salaries, and agency management of scholarship and loan repayment to assure access to care in needed areas.

The recent action by the Board of Dentistry to allow dental hygienists to practice under the general supervision of dentists (i.e., dentist does not have to be on-site when services are provided), working within the prescriptive guidelines of signed plans of care for patients, has the potential to improve access to preventive dental care. However, this new public health dentistry service delivery model relies on the availability of dental hygienists, who are in short supply.

Financial support for advanced, improved technology will be required to maintain public health dental practices that are in step with current standards of care and best practices (such as digital radiography, electronic billing, access to databases for verification of recipient eligibility, etc).

Dental clinic environments include state and locality owned buildings and locally owned mobile dental clinics (trailers). There are 62 clinical dental facilities as of May 15, 2005 including 24 trailers and 38 fixed facilities. Typical dental clinics are two or three chair facilities with x-ray units and major support equipment including compressors, vacuums, film developers and autoclaves. Much of this equipment is fully depreciated by age, reducing its actual value significantly. The estimated replacement value for existing major equipment is detailed below, comprised of local and state funds:

- Operatory Equipment $2,301,600
- Support Equipment $539,400
- Panorex X-ray units $140,000
- Trailer Bodies $960,000

Total $3,941,000

As noted, a great number of individual equipment items are fully depreciated and have exceeded their recommended useful life. Older equipment is stressful for clinicians to use, difficult to disinfect according to current standards and an impediment to hiring recent graduates accustomed to current technology. Many of the existing dental trailers are structurally in poor condition and are not mobile as a result.

Anticipated Changes To Service Area Products and Services

Beginning in FY 06, VDH will receive an additional $500,000 in State General Funds for infrastructure needs for dental clinics in local health departments. In order to implement an equipment replacement plan, data was collected from all local health department dental clinics in April 2005. The age of major equipment was recorded for each clinic item surveyed including x-ray unit (standard and panorex,) delivery unit, vacuum pump, compressor, autoclave, film processor, chair and light. These are the major equipment items that will be targeted for replacement in VDH dental clinics starting in FY06. Estimates of useful life of equipment were used to provide a replacement plan concentrating on fixed facilities in the first year. Future plans for infrastructure will include developing mobile delivery options in areas utilizing dental trailers. Replacement dental unit delivery systems will include fiber optic units. Updating delivery units will by design improve the productivity of the dental staff, reduce staff strain, facilitate infection control and reduce the potential for cross contamination. It will also affect the ability to attract and retain new dentists in VDH positions, as many dentists are not prepared to work on older dental units if initially trained with modern equipment and technology. In order to utilize the technology new fiber optic drills will also be a portion of the expenditure when replacing a dental unit.

Service Area Financial Summary

The total annual budget for Local Dental Services (44002) is $8,623,047 for each year. Of this amount, $2,877,516 is State General fund allocation and $5,745,531 is non-general fund. The non-general fund is comprised of the following funding sources:

- local government matching funds
- revenues earned for dental services provided
- 100% local funding
- Federal funds (PHHS)
- Non-Federal grants and contracts

Funding supports dental service area programming including dental health promotion, education, outreach, and infrastructure for provision of direct dental services in local health districts.

	Fiscal Year 2007		Fiscal Year 2008	
	General Fund	Nongeneral Fund	General Fund	Nongeneral Fund
Base Budget	$2,713,336	$4,784,767	$2,713,336	$4,784,767
Changes To Base	$164,180	$960,764	$164,180	$960,764
SERVICE AREA TOTAL	**$2,877,516**	**$5,745,531**	**$2,877,516**	**$5,745,531**

Service Area Objectives, Measures, and Strategies

Objective 44002.01

Improve and maintain population based factors affecting oral health status

Oral health is an essential and integral component of health throughout life. Cultural values influence oral health and well-being and can play an important role in care utilization practices and in perpetuating acceptable oral health norms. Cultural norms influence decisions and priority setting related to seeking professional dental care and establishing the routine of dental self-care behavior. The burden of oral diseases and conditions is disproportionately borne by individuals with low socioeconomic status and/or minority membership at all ages. Community water fluoridation, an effective, safe and ideal public health measure, benefits individuals of all ages and socioeconomic strata. Unfortunately, nearly one in seven Virginians is without this critical public health component. Effective disease prevention and health promotion measures exist for use by individuals, practitioners, and communities.

Virginia's local health department dental programs monitor the oral health status of their communities using standard measures of need, measuring progress toward improving or maintaining the status, identifying the immediate factors affecting such status and communicating this information to individuals, non-dental health providers, and the community. Factors monitored include fluoridation levels of public water systems, percentage of populations served by optimally fluoridated public water, participation in fluoride mouth rinse programs, oral cancer rates, access and availability of direct dental care, and utilization of preventive dental services across age and population groups. Public health professionals educate the public about optimum oral health and oral diseases and conditions.

This Objective Supports the Following Agency Goals:

- Provide strong leadership and operational support for Virginia's public health system.

  (This objective also aligns with Virginia's long term objective to inspire and support Virginians toward healthy lives and strong and resilient families.)
- Promote systems, policies and practices that facilitate improved health for all Virginians.

  ( )
- Collect, maintain and disseminate accurate, timely, and understandable public health information.

  ( )

This Objective Has The Following Measure(s):

- **Measure 44002.01.01**

  The number of Local Health Districts that monitor the fluoridation of all public water supplies in the health district and determine the percent of district population served by community water supplies with optimum fluoridation, annually

  Measure Type: Output **Measure Frequency:** Annually

  Measure Baseline: Five districts (14%) in 2004.

  Measure Target: 15 districts (43%) by end of FY07.

  Measure Source and Calculation:

  Community water fluoridation is the procedure of adjusting the natural fluoride concentration of a community's water supply to a level that is best for the prevention of dental decay. From the 1940s until the 1980s, the number of citizens in the United States served by fluoridated water systems increased and then stabilized at about 60-62%. In Virginia, approximately 81% of citizens are served by fluoridated public water systems, and approximately 5% of citizens have water naturally high in fluoride. In systems where fluoride is added, the level of fluoridation must be monitored carefully to assure that optimum fluoridation is achieved and maintained.

  Operators of municipal water plants strive to maintain targeted concentrations of fluoride in water in fluoridated communities. These fluoride levels are reported to the VDH Office of Drinking Water (ODW) and are available to local health districts. Local health districts that are not fully served by fluoridated public water systems (five districts are fully fluoridated) may monitor fluoridation levels and customer numbers to determine the percent of the district population served by optimally fluoridated water. Using this information, the local health department determines the need for alternative fluoride delivery for persons not served by fluoridated water. This measure may be monitored by counting the number of local health districts of those that are not fully fluoridated (30) that submit water samples for fluoride determination prior to dispensing fluoride supplements.

Objective 44002.01 Has the Following Strategies:

- Maintain a current roster of all public water supplies and the number of people served.
- Monitor the fluoridation of all public water supplies in the health district and determine the percent of district population served by community water supplies with optimum fluoridation, annually.
- Monitor the number of schools and participants in the local health district participating in fluoride mouth rinse programs.
- Compile demographic data for the local health district to include population by age, sex, race and indigency rate and number of children eligible for free and reduced school lunch.
- Determine the percent of children participating in the free school lunch program in grades K-8 who receive preventive and therapeutic dental services, including dental sealants, by evaluating a representative sample of participants in the local health district, every three years.
- Measure the number of new oral cancer cases annually in local health district and evaluate stage at diagnosis and mortality rates from oral cancer.
- Conduct school surveys determining DMFS (Decayed, Missing, Filled, Sealed) and percent sealants on first and second permanent molars for representative sample of students from grades 1,4,8, and 10 in each local health district. Survey conducted every 3 years.

- Maintain a list of licensed, practicing oral health providers in each district, including the status of participation in Virginia Medicaid. Determine the dental provider: population ratio, to aid in assessing qualification of a county or area for designation as a dental profession shortage area.
- Provide oral health education to increase public knowledge and practice of preventive oral health measures.
- Partner with primary care providers to increase knowledge of oral health disease and its impact on general health.
- Educate at risk populations in risk reduction, especially the provision of tobacco cessation programs.
- Train non dental health professionals in the community and in public health programs serving children ages 0-3 years in the indications for and proper application of fluoride varnish.

Objective 44002.02

Provide oral healthcare services targeting at risk populations, particularly low income children

Oral diseases are progressive and cumulative and become more complex over time. They affect our ability to eat, how we look and our ability to work at home, at school, or on the job. Health disparities exist across population groups at all ages. Over 50% of 5-9 year old children have at least one cavity or filling; that increases to 78% among 17 year olds. Poor children suffer twice as many dental caries than their more affluent peers, and their disease is more likely to be untreated. Children living below the poverty line have more severe and untreated decay. Professional care is necessary for maintaining oral health, but 25% of poor children have not seen a dentist before entering kindergarten. Children without dental insurance are three times more likely to have dental needs than children with either public or private insurance. Fewer than one in five Medicaid-covered children received a single dental visit in a recent year-long study. More than 51 million school hours are lost each year nationally to dental-related illness; poor children suffer nearly 12 times more restricted-activity days than children from higher-income families.

Local health districts that provide direct dental services to individuals target low income, uninsured or Medicaid-covered children primarily, with secondary target populations including low income adults including elderly and special populations such as mental health, elderly, and homeless.

This Objective Supports the Following Agency Goals:

- Provide strong leadership and operational support for Virginia's public health system.
  ( )
- Promote systems, policies and practices that facilitate improved health for all Virginians.
  (This objective also aligns with Virginia's long term objective to Inspire and support Virginians towards healthy lives and strong resilient families.)

This Objective Has The Following Measure(s):

- **Measure 44002.02.01**

  The number of low income children and adolescents receiving dental services provided by local health department public health dental staff

  Measure Type: Output **Measure Frequency:** Annually

  Measure Baseline: 24,763 in FY05.

  Measure Target: 26,002 (5% increase) by end of FY07.

  Measure Source and Calculation:

  Local health districts that provide dental services target persons aged 1-4 years old with family income under 200% Federal poverty level or enrolled in Medicaid,and persons 5-18 years old who are eligible for Federal school lunch program or who are enrolled in Medicaid. Local health district dental programs provide monthly statistics to the VDH Division of Dental Health reporting demographic information on the patients served and the number and types of services provided. These data are compiled and reported semiannually and annually. The number of visits is tracked by age, gender, income and insurance status. Most health districts also enter dental data into VDH data system, WebVision. Reports available from that source are also useful in evaluating unduplicated patient counts by income or insurance status.

- **Measure 44002.02.02**

  Number of dental sealants placed on teeth of low income children and adolescents by public health dental workforce

  Measure Type: Output **Measure Frequency:** Annually

  Measure Baseline: 19,940 in FY05.

  Measure Target: 21,934 (10% increase) by end of FY07.

  Measure Source and Calculation:

  Local health districts that provide dental services target persons aged 1-4 years old with family income under 200% Federal poverty level or enrolled in Medicaid and persons 5-18 years old who are eligible for Federal school lunch program or who are enrolled in Medicaid. Local health district dental programs provide monthly statistics to the VDH Division of Dental Health reporting demographic information on the patients served and the number and types of services provided. These data are compiled and reported semiannually and annually. The number of visits is tracked by age, gender, income and insurance status. Most health districts also enter dental data into VDH data system, WebVision. Reports available from that source are also useful in evaluating unduplicated patient counts by income or insurance status.

Objective 44002.02 Has the Following Strategies:

- Improve the quantity and quality of dental services to target populations
  o Achieve an child/adult ratio of patients of 75% minimum, with a goal of 90% (90% children,adolescents/10% adults).
  o Achieve a patient no-show rate in clinic of less than 20%.
  o See an average of 10 patients per day.
  o Provide an average of 37 total services per day.
  o Achieve and maintain a patient base consisting of 95% or more Medicaid-enrolled or uninsured low-income patients.
  o Achieve a reported waiting time to get an appointment under two weeks.
  o Maintain access to translator services for non-English speaking or hard of hearing clients.
  o Maintain dental equipment and keep service records and maintenance schedules up to date.
  o Maintain compliance with OSHA, CLIA and other regulatory requirements.
  o Maintain dental records and documentation according to published standards.
  o Document and appropriately label prescription medication dispensed, according to all applicable laws and regulations.
  o Maintain continuing education of professional dental workforce.
- Increase the number of sealants provided to children and adolescents
  o Develop a callback system to remind patients who received restorative care initially to return for follow up preventive services.
  o Train dental assistants to place sealants under the direct supervision of a licensed dentist.
  o Utilize dental hygienists under the recent provision for general supervision of a hygienist, to increase access to preventive dental care including sealants.